

Abstract Submitted
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Spin polarized scanning tunneling microscopy of bilayer manganite $La_{2-2x}Sr_{1+2x}Mn_2O_7$ single crystals.¹ XINZHOU TAN, ALEX DE LOZANNE, JIANSHI ZHOU, JOHN GOODENOUGH, Univ of Texas, Austin — We employ spin-polarized scanning tunneling microscopy to investigate the (001) surface of bilayer manganite $La_{2-2x}Sr_{1+2x}Mn_2O_7$ single crystals with $x = 0.32$ at various temperature and different magnetic fields. A spin reorientation transition (SRT) at this doping level starts around 70K, when the ferromagnetic spins change from out of plane to in plane configuration. Tracing the SRT while applying magnetic field along the c axis we are going to investigate the corresponding magnetic domain wall structure and motion in detail by spin polarized tunneling. Moreover, we are also going to search for the emergence of biskyrmions near the same doping level.

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